

Reconnection and Spire Drift in Coronal Jets

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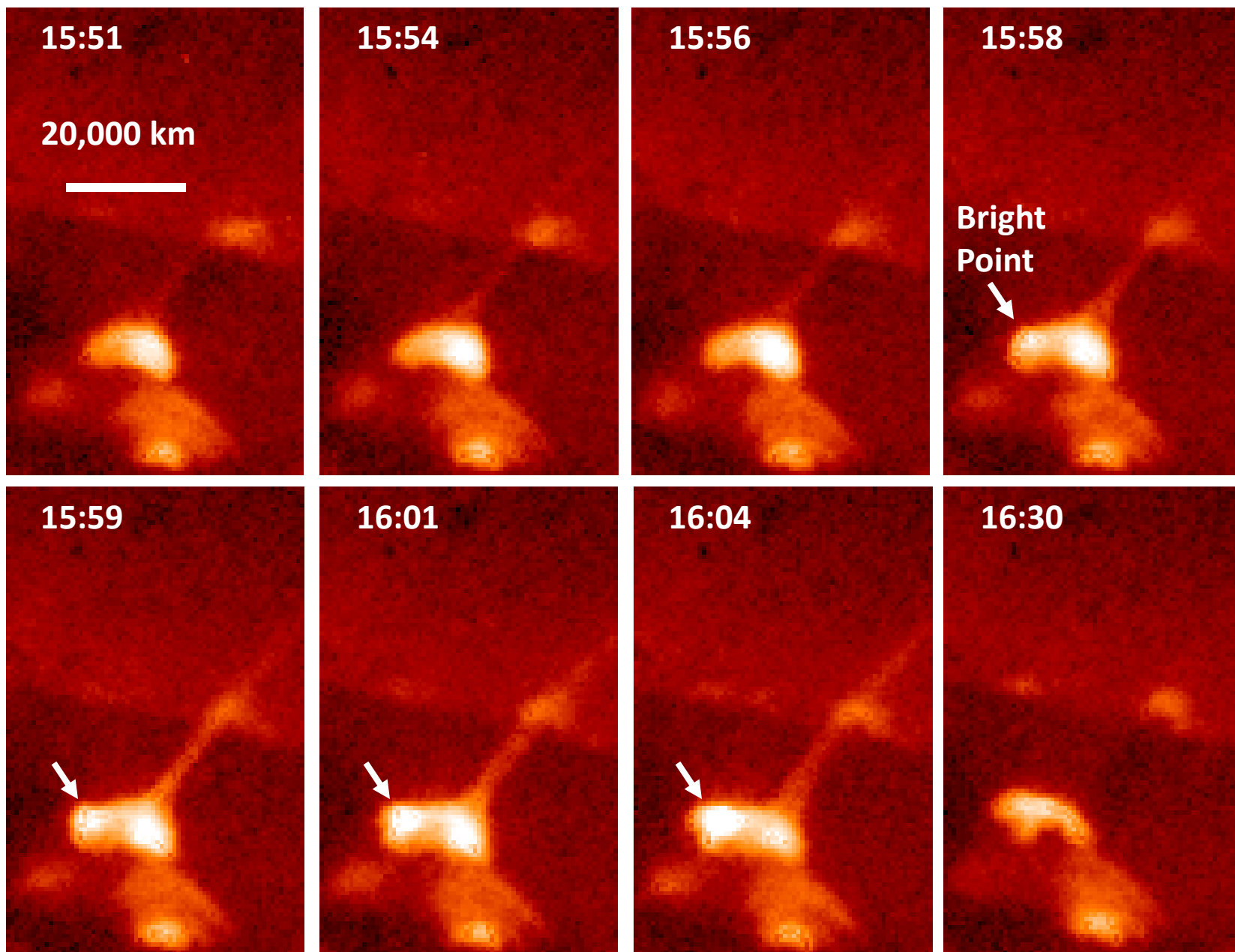
**NASA/MSFC/UAHuntsville
National Space Science and Technology Center**

Main Points

- There are two kinds of X-ray jets in coronal holes: **standard** jets and **blowout** jets.
- In most jets of either kind, as the spire grows:
 - A bright point grows at the edge of the base of the jet, and
 - The spire drifts away from the bright point.
- The conventional emerging-flux model for jets implies: the spire should drift toward the bright point.
- Alphonse's minifilament-eruption model for jets implies: the spire should drift away from the bright point.
- ➡ The observed drift direction is explained by most coronal-hole X-ray jets being driven by a minifilament eruption instead of emerging flux.

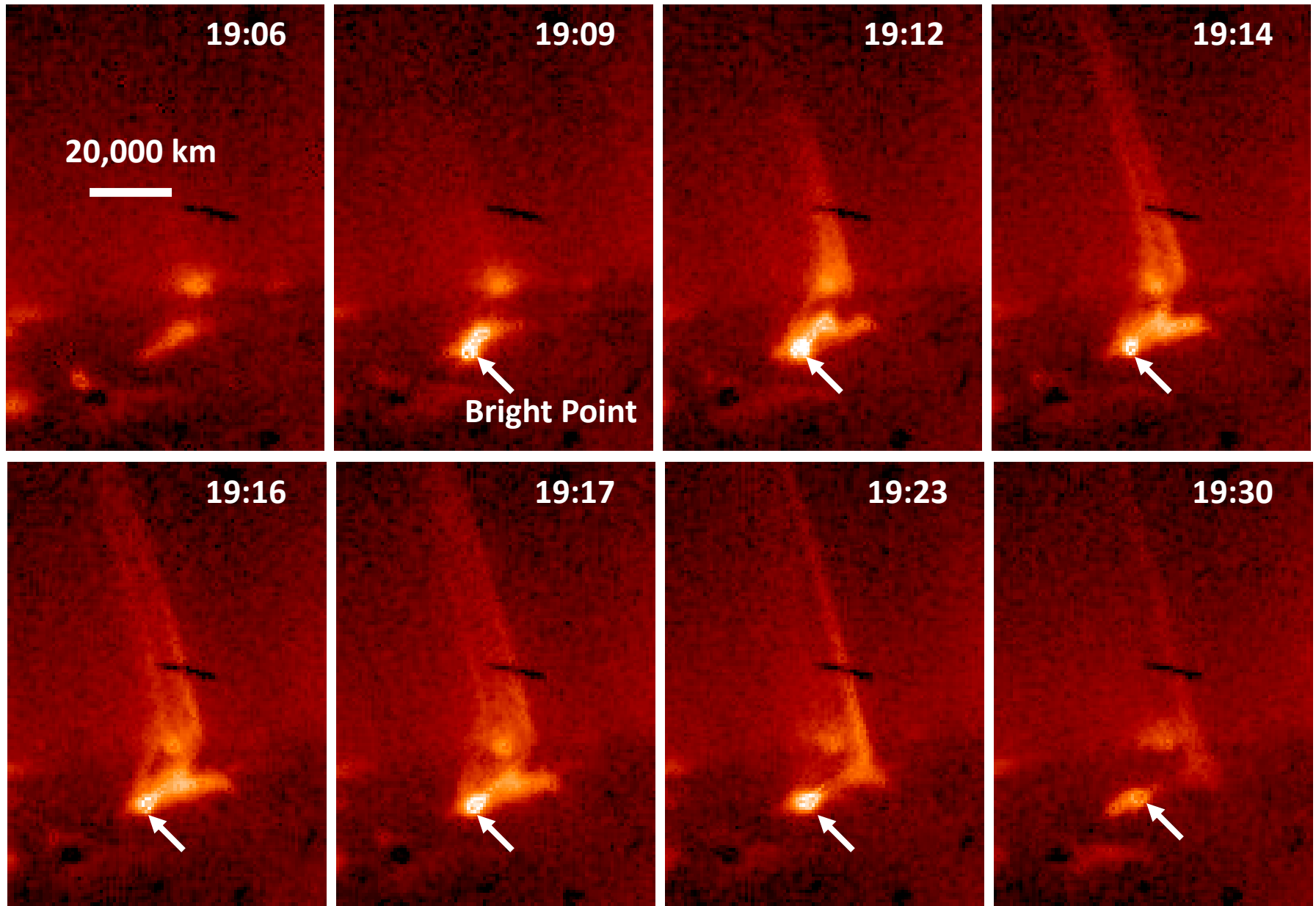
Standard Jet

Hinode/XRT Thin Al Poly, 2008 Oct 5

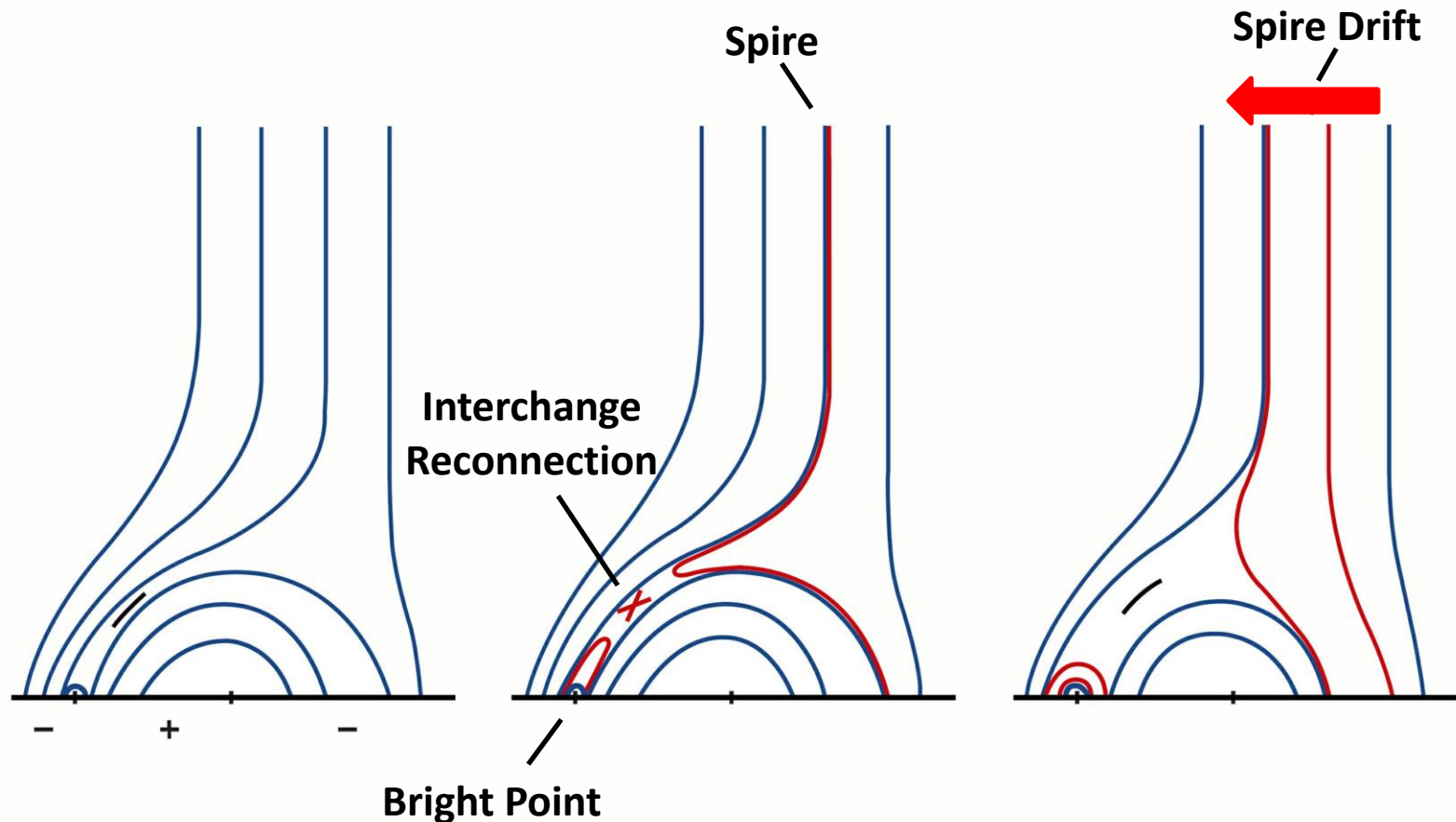


Blowout Jet

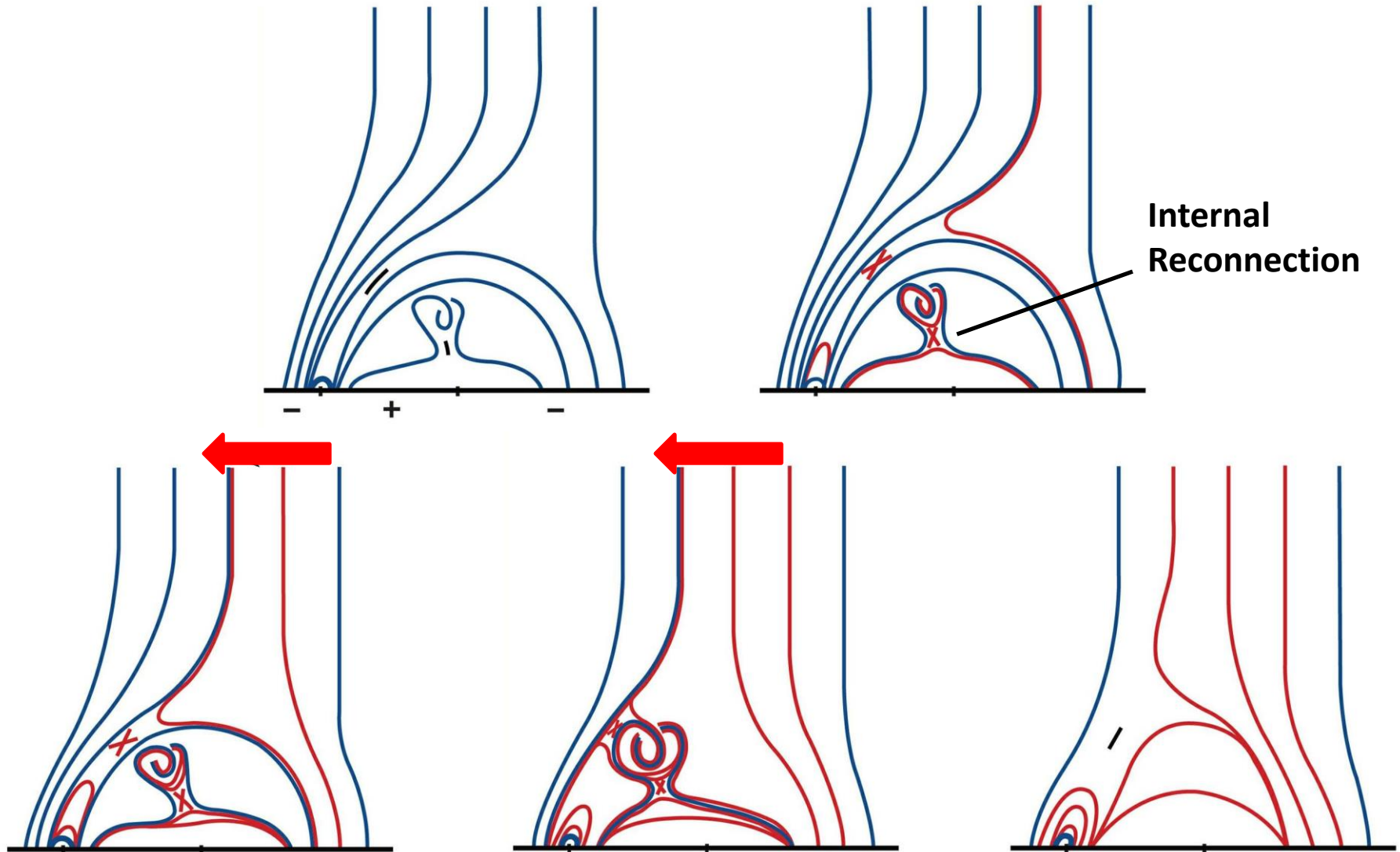
Hinode/XRT Thin Al Poly, 2008 Sept 20



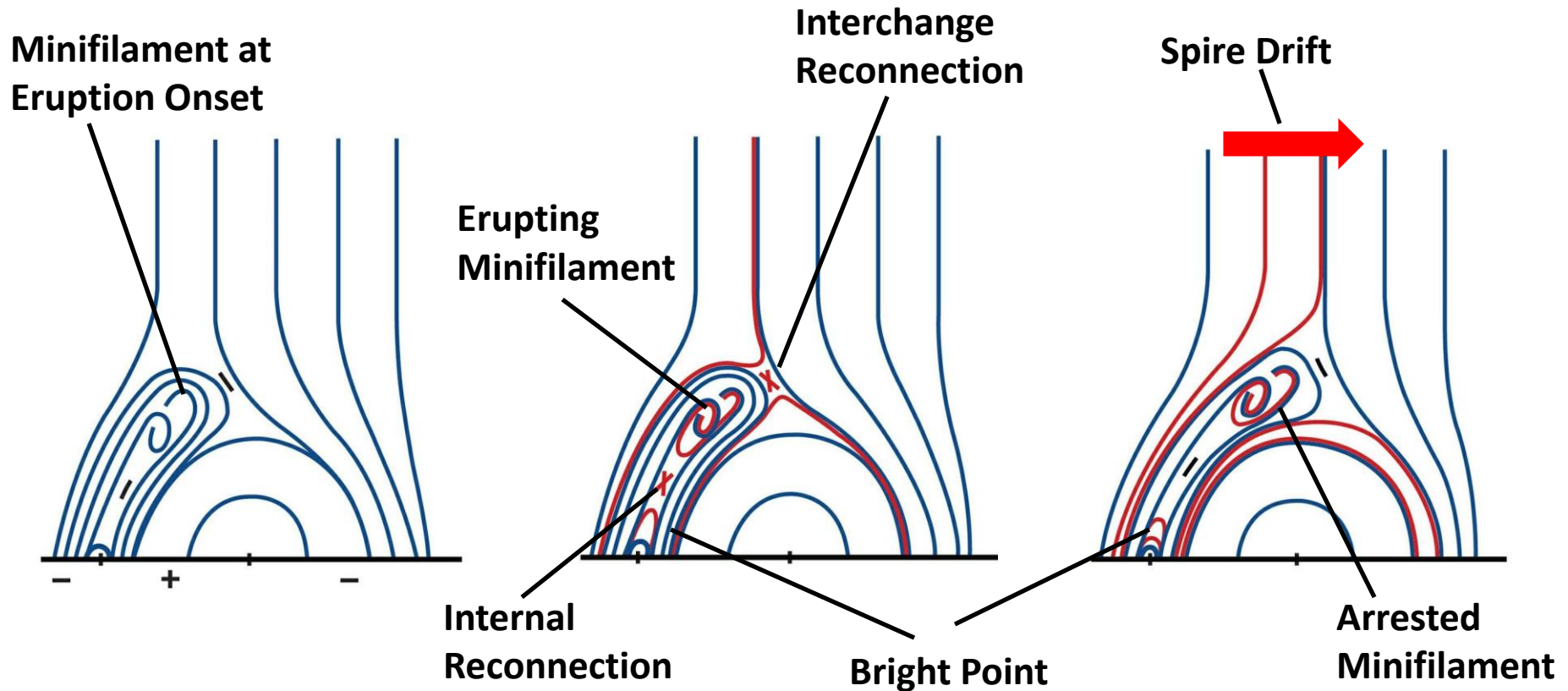
Emerging-Flux Model for Standard Jets



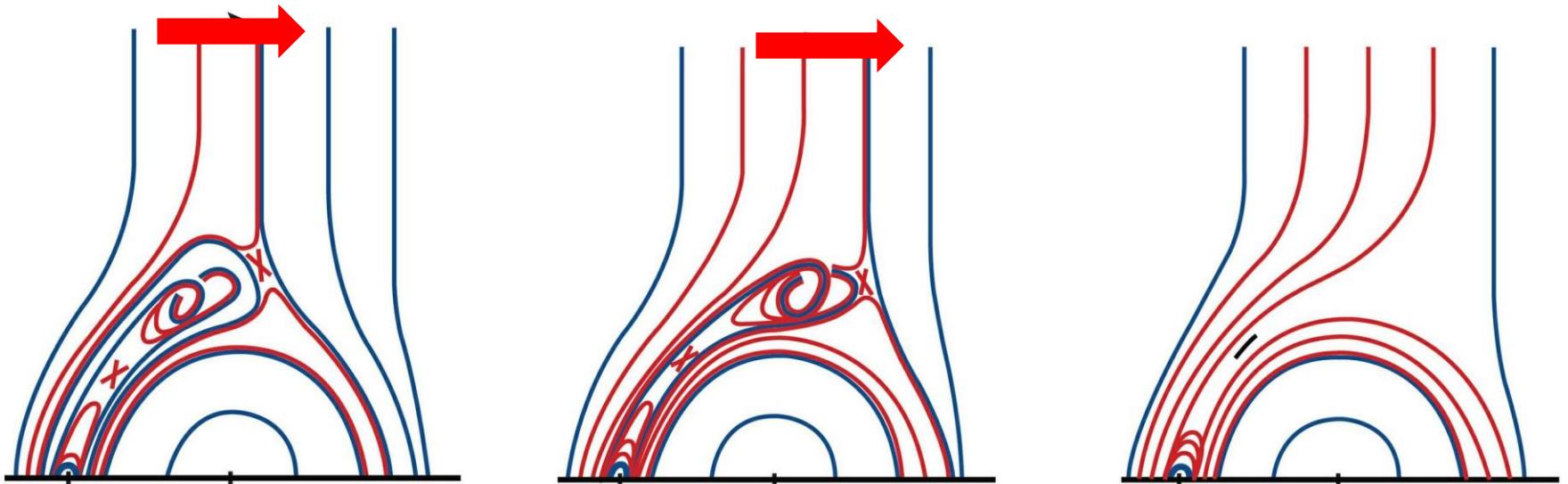
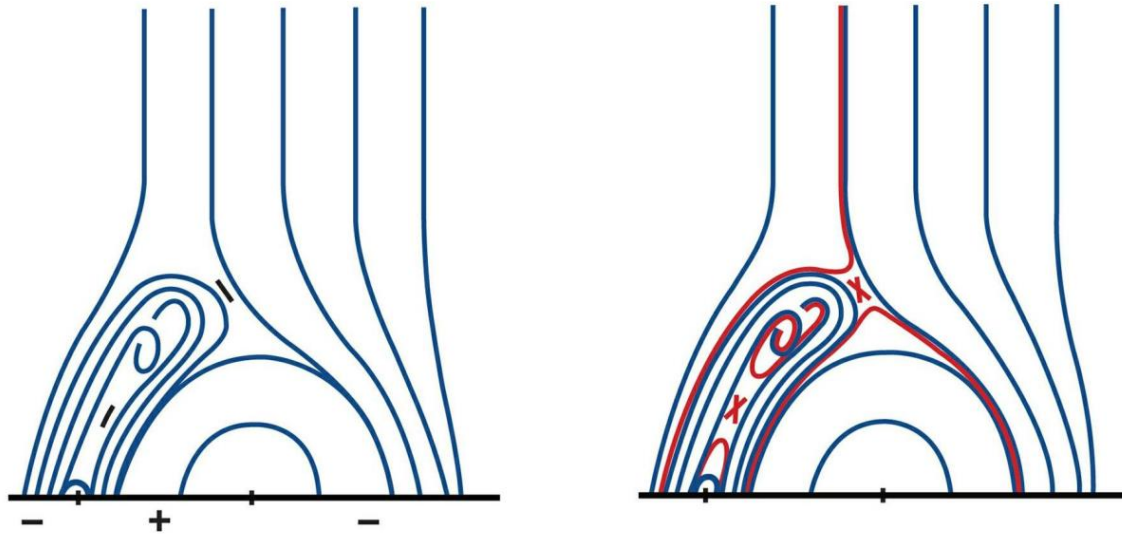
Emerging-Flux Model for Blowout Jets



Minifilament-Eruption Model for Standard Jets



Minifilament-Eruption Model for Blowout Jets



Conclusion

For most X-ray jets in coronal holes,
the spire drift says:

- Alphonse's minifilament-eruption model is right.
- The conventional emerging-flux model is wrong.